

REMARKS

Reconsideration of the present application is respectfully requested. Claims 1-54 were originally presented, and claim 55 was previously added. Claims 1-3, 5-7, 9-15, and 18-55 have been canceled so that claims 4, 8, 16, and 17 are currently pending. Claims 4, 8, and 16 are in independent form.

In the Office Action of October 25, 2007, the Examiner rejected claims 1-17, 32, and 33 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,726,117 to Khare et al. (hereinafter, Khare '117). Applicants have canceled claims 1-3, 5-7, and 9-15 and have rewritten claims 4, 8, and 16 in independent form. As discussed in detail below, Applicants submit that independent claims 4, 8, and 16 are not anticipated by Khare '117, because, for example, Khare '117 fails to teach a sorbent composition comprising a reduced-valence promoter as recited in independent claims 4, 8, and 16.

Independent claims 4, 8, and 16 each recite a promoted sorbent composition, wherein substantially all of the promoter has a valence less than 2 (claim 4) or a valence of zero (claims 8 and 16). In contrast, Khare '117 teaches a sorbent composition that includes a Group VIII *metal oxide* promoter.¹ Khare '117 provides several examples of metal oxide promoters suitable for use in its sorbent composition, including iron oxide, cobalt oxide, *nickel oxide*, ruthenium oxide, rhodium oxide, palladium oxide, osmium oxide, iridium oxide, and platinum oxide.² Each of the metal oxide promoters disclosed by Khare '117, as well as any other metal oxide promoter, would necessarily have a valence of two or more. The use of a metal oxide promoter, according to Khare '117, "can improve the physical and chemical properties of the sorbent composition."³

According to Khare '117, "[t]he promoter can be added to the sorbent composition in the form of the elemental metal, metal oxide, and/or metal-containing compounds."⁴ Khare '117 teaches that when the promoter is added to the sorbent composition in the form of an elemental metal and/or metal-containing compound, the promoted sorbent must then be calcined to convert the metal or metal-containing compound promoter into a metal oxide promoter.⁵ Even if the sorbent composition has been calcined prior to the addition of the promoter, Khare '117 teaches

¹ Khare '117 at col. 3, ll. 36 and 37.

² *Id.* at col. 3, ll. 43-47.

³ *Id.* at col. 3, ll. 37-39.

⁴ *Id.* at col. 3, ll. 55-57.

⁵ See, for example, Khare '117 at col. 3, ll. 55-58; col. 4, ll. 6-28; col. 9, ll. 42-51; col. 12, ll. 27-37; col. 14, ll. 18-28; and col. 16, ll. 18-28.

that the “now-promoted composition is dried and calcined a second time” in order to convert the promoter metal into a metal oxide.⁶ The resulting metal oxide promoted sorbent composition can then be employed in a sulfur removal process.⁷

Thus, Applicants submit Khare '117 teaches a metal oxide promoted sorbent composition suitable for use in a sulfur removal process, wherein substantially all of the promoter has a valence of two or more. This is in direct contrast to independent claims 4, 8, and 16, which respectively recite a promoted sorbent composition wherein substantially all of the promoter has a valence less than 2 (claim 4) or a valence of zero (claims 8 and 16). Thus, Applicants submit that independent claims 4, 8, and 16 are not anticipated by Khare '117, and, accordingly, respectfully request the reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b).

In addition, Applicants submit that modifying the sorbent of Khare '117 to comprise a reduce-valence promoter as recited in independent claims 4, 8, and 16 would not be obvious. For example, Applicants submit that one skilled in the art would not be inclined to reduce the metal oxide promoted sorbent composition of Khare '117 because doing so would go against the express teachings of Khare '117. Thus, Applicants submit that independent claims 4, 8, and 16 are patentable over the prior art references of record, including Khare '117.

Claim 17 depends from independent claim 16. This dependent claim recites additional patentable features and should also be allowable as being based on an allowable base claim.


⁶See Khare '117 at col. 4, ll. 6-28.

⁷Khare '117 at col. 4, ll. 57-62.

In light of the foregoing, the application should be in condition for allowance and such allowance is respectfully requested. Should the Examiner have any questions, please contact the undersigned at (800) 445-3460. The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 19-0522.

Respectfully submitted,
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